

Animal Research

Roche Principles of Care and Use

Adopted by the Roche Corporate Executive Committee on October 13, 2004

The overall goal for Roche, as a leading healthcare company, is to create, produce and market innovative solutions of high quality for unmet medical needs. Roche's products and services help prevent, diagnose and treat diseases, thus enhancing people's health and quality of life. We do this in a responsible and ethical manner and with a commitment to respecting the needs of the individual, society and the environment.

Many serious diseases such as AIDS, Alzheimer's disease, Parkinson's disease, hepatitis, cancer, cardiovascular diseases and diabetes are incompletely understood and treatments for them are far from perfect. Therefore, new and more effective therapies and diagnostics are needed to improve the quality of patients' lives. However, before human trials can be conducted, animal testing of drug candidates is required. Thus, the appropriate and responsible use of animals is an indispensable component of pharmaceutical product discovery and safety testing processes.

For Roche, the proper care and use of laboratory animals is of fundamental importance. Every individual who works with animals within Roche or on behalf of Roche is required to act ethically and to treat the animals under their care with respect.

Therefore, the following principles have been developed to outline the measures in place for the care and use of all animals for which Roche is responsible:

1. Compliance with laws, regulations, scientific and ethical standards

- Roche is in compliance with existing **international** (e.g. the ICH Guidelines), **regional** (e.g. the EU Directive on Animal Welfare, 86/609) **and national laws and regulations**, as well as with applicable **industry standards**, for animal testing. In addition to the applicable local laws and regulations, every Roche research site conforms with the **standards established by the International Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC)**.
- Procedures involving animals are designed and performed with respect to their **relevance to human or animal health, advancement of knowledge, and the benefit to society**.

2. Reduction, Refinement and Replacement – the 3 Rs

Roche is **dedicated to following the 3 Rs** for animal research and testing, and encourages the development of alternatives to the use of animals in research:

- **“Reduction”** pertains to using the **minimum number of research animals** necessary in order to obtain valid scientific data as well as to **improving the development of testing methods that require fewer animals**. **Unnecessary duplication** of experiments is avoided by regular exchange of scientific information amongst various Roche research sites.
- **“Refinement”** means tailoring laboratory animal procedures to **minimize discomfort and to ensure proper and ethical care** of animal subjects.
- **“Replacement”** involves the development and use of **alternative methods** that do not require the use of animals but can provide equivalent, valid, scientific data such as mathematical models, computer simulation, and in-vitro and cellular biological systems. Where the law and regulatory authorities allow and where it is scientifically

possible and ethical, Roche employs medical testing procedures that do not require the use of animals.

3. Principles related to the use of animals (during experimentation)

- Planned animal studies undergo rigorous reviews to assure that:
 - they are **scientifically justified**,
 - **correct species are selected**,
 - **appropriate numbers of animals will be used and**
 - **animal suffering will be alleviated or minimized**.
- Research personnel (e.g., study directors, lab technicians, animal care takers, veterinarians and animal welfare officers) place a **high priority on the comfort and well-being** of laboratory animals throughout the research process. **Mistreatment of animals is never tolerated**. Violations result in most severe disciplinary actions, including possible dismissal.
- The proper and scientifically sound use of animals, including the **avoidance or minimization of pain, distress and discomfort**, is imperative. Procedures that may cause more than momentary or minor pain or distress are performed with appropriate sedation, anaesthesia, or analgesia. Exceptions must be clearly defined, justified, and approved by appropriate authorities.
- Animal euthanasia is performed **with minimum infliction of distress and physical suffering**, using an approved method appropriate for the species.

4. Principles related to the care of animals (animal husbandry)

- Laboratory animals are procured from reputable, **approved vendors and research facilities**.
- **Modern, fully-equipped animal facilities** and **species-appropriate husbandry practices** contribute to the animals' overall health and well-being.
- **Excellent sanitation and veterinary care programs** are high priorities in Roche's animal facilities.

5. Personnel education and training

- All investigators and personnel (e.g., study directors, lab technicians, animal care takers, veterinarians and animal welfare officers) are **appropriately educated and trained** in the care and use of laboratory animals. **In-service and/or external training** is provided as a means for continuous improvement and according to local requirements.

6. Supervision

- All experimentation on living animals is conducted under **close supervision of qualified and experienced personnel**.
- **Internal review and audits** are performed by animal welfare officers and/or committees that exist specifically for this purpose.
- Procedures are **submitted for approval by the Institutional Animal Care and Use Committee (IACUC) and/or by appropriate governmental agencies responsible for animal welfare** in compliance with local laws and regulations.